NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT
Date of report: December 1, 2008
Reporting period: October 1 to December 31, 2008

Project Title:	Portable Work Zone Barrier-Balsi Beam
RFP NUMBER: 2007-14	NJDOT RESEARCH PROJECT MANAGER: Edward Kondrath
TASK ORDER NUMBER: RFCUNY 29 – Mod.#1	PRINCIPAL INVESTIGATOR: Robert Paaswell
Project Starting Date: 1/1/ 2007 Project Ending Date: 12/31/2008	Period Starting Date: October 1, 2008 Period Ending Date: December 31, 2008

Tasks for Phase I – Fabrication	**% of Total**	**% of Task this quarter**	**% of Task to date**	**% of Total Complete**
Task 1: Advisory Committee meetings and presentations	30%	0%	100%	30%
Task 2: Licensing, Cost Estimates	50%	0%	50%	25%
Task 3: Documentation	20%	0%	60%	12%
TOTAL	100%			67%

Project Objective:
The objectives of this project are the fabrication, implementation, and evaluation of the Caltrans Balsi Beam portable protection device for the safety of New Jersey Department of Transportation workers in short duration highway work operations. This two-phase project will build on the results of the previous study, "Identification of Traffic Control Devices for Mobile and Short Duration Work Operations," which identified the potential for the Balsi Beam to protect exposed highway workers along the shoulder and in the traveled lanes of high traffic, high speed areas.

Project Abstract:
This work will focus on the fabrication and implementation of the Balsi Beam which is a truck mounted, moveable, expandable beam that provides positive work zone protection comparable to a fixed concrete barrier. It is specifically intended to enhance worker safety when carrying out shoulder repair in work zones adjacent to guardrails, inlet repair, bridge rails, bridge deck repair, sound walls and other work where workers are normally exposed to traffic or behind cones in limited work areas for several hours. Usually the shadow vehicle or the truck mounted attenuator provides protection from rear end collisions; the new device provides protection from adjacent lane traffic.

The Balsi Beam provides positive, steel beam protection system for exposed workers who normally work behind temporary cones and barrels in limited work areas. The TL-3 crash test at the Texas Transportation Institute shows that the beam does not deflect as

conventional unpinned portable concrete median barrier in such crashes. The Balsi Beam is practically applicable to bridge and concrete repair projects where workers are concentrated in small areas over a one day period or less.

The Balsi Beam was developed by the California Department of Transportation, Federal Highway Administration and the Texas Transportation Institute under the Strategic Highway Research Program. The device was implemented by Caltrans on Interstate Route 80 in Northern California. The Caltrans implementation identified the ease of transporting the beam to the job site, ease of set up and ability of workers to work in the protected areas. Caltrans is able to use small front end loaders, compressors and other such equipment in the protected area. Workers like the protection of a positive barrier between them and high speed traffic.

1. Progress this quarter by task:

- The research team has identified a lateral protection equipment for mobile and short duration work operations. The equipment is designed and fabricated by Mobile Barriers, LLC. based at Denver, Colorado. The team made a field trip to Denver for a demonstration of the equipment. The equipment is owned and used by the Colorado Department of Transportation (CDOT). During the site visit, the research team had the opportunity to observe the equipment being utilized by CDOT at nighttime road maintenance operations.

2. Proposed activities for next quarter by task, and anticipated percentage complete by end of quarter.

- The research team is waiting for guidance from NJDOT on future steps.

3. List of deliverables provided in this quarter by task (product date)

Materials from the Denver's field trip.

4. Progress on Implementation and Training Activities
NA

5. Problems/Proposed Solutions
NA

BUDGET EXPENDED AND REMAINING

Year 1 Total Project Budget	$23,170
Modified Contract Amount:	**$43,120**
Total Project Expenditure to date	$23,170
% of Total Project Budget Expended	54%

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NARRATIVE PROGRESS REPORT

Date prepared: 12/4/08

PROJECT INFORMATION:

Project Title:	Transit-Oriented Development Benefits of New Transit Service: RiverLine

RFP NUMBER: 2007-04	NJDOT RESEARCH PROJECT MANAGER: Edward Kondrath
TASK ORDER NUMBER: RFCUNY 28	PRINCIPAL INVESTIGATOR: Daniel Chatman
Project Starting Date: 1/1/ 2007 Project Ending Date: 6/30/2009	Period Starting Date: October 1, 2008 Period Ending Date: December 31, 2008

PERCENT OF WORK COMPLETED:

Activity	**% of Task Complete**
Task 1.1 – Review literature and data	100%
Task 1.2 – Develop/revised detailed work plan	100%
Task 2.1 – Assemble secondary data	100%
Task 2.2 – Design original data collection	100%
Task 2.3 – Land development benefits	95%
Task 2.4 – Economic development benefits	85%
Task 2.5 – Travel and smart growth benefits	80%
Task 2.6 – Prepare/submit reports	0%

UTRC Concurrence: _____

Name Title Date

PROGRESS BY TASK FOR THIS REPORTING PERIOD

The following activities were undertaken by the research team during this reporting period. The percentage of each task that has been completed is noted in parentheses.

- Phase II, Task 3: Land development benefits (95%)
  - Describe south New Jersey land use, travel and employment context (75%)
  - Model land values (75%)
- Phase II, Task 4: Economic development benefits (85%)
  - Field firm (paper) survey (100%)
  - Conducted in-person firm surveys at 18 (out of 20) station areas to achieve sufficient sample (100%)
  - Data entry and cleaning (100%)
  - Preliminary analysis (15%)
- Phase II, Task 5: Travel and smart growth benefits (80%)
  - Map & describe changes in permits (100%)
  - Analyze travel impacts (60%)
- Other:
  - Held 2 team progress meetings between Rutgers staff
  - Coordinated firm survey data collection, entry and cleaning among VTC & BCSR/SRBI staff
  - Prepared and presented poster to NJ DOT Research Showcase

ANTICIPATED ACTIVITIES NEXT PERIOD BY TASK

We anticipate undertaking the following activities during the 1st quarter 2009 (January 1, 2009 to March 31, 2008) by task. The anticipated percentage of each task to be complete by the end of the quarter is noted in parentheses.

- Phase II, Task 3: Land development benefits (100%)
  - Describe south New Jersey land use, travel and employment context (100%)
  - Model property values (100%)
- Phase II, Task 4: Economic development benefits (100%)
  - Describe south New Jersey firm behavior (100%)
- Phase II, Task 5: Travel time and smart growth impacts (100%)
  - Analyze travel impacts—using survey data (100%)
- Phase II, Task 6: Prepare/submit reports (50%)
  - Prepare draft reports for submittal (100%)

LIST OF DELIVERABLES PROVIDED IN THIS QUARTER BY TASK

None

PROGRESS ON IMPLEMENTATION AND TRAINING ACTIVITIES

None

PROBLEMS/PROPOSED SOLUTIONS

None

As noted last quarter, a paper version of the firm survey was administered by researchers in the field. Collection of data via this method proved successful, though time consuming. A total of 83 completed surveys were gained by this endeavor. Sufficient sample was unavailable without taking this unusual step. Future research undertaken in this region may require similar efforts in the future.

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Transit-Oriented Development Benefits of New Transit Service: RiverLine

Task Order No. RFCUNY 28

BUDGET SYNOPSIS

Reporting Period: 10/1/08 to 12/31/08

Task No.	Task Description	% of TPC	Cost of Task			Current Billing Period				Previously Billed				Cumulative Expenses			
			NJDOT Share	UTRC Match	Total	% Compl	NJDOT Share	UTRC Match	Total	% Compl	NJDOT Share	UTRC Match	Total	% Compl	NJDOT Share	UTRC Match	Total
1.1	Review literature and data	7%	17,225	6,291	23,516	0%	0	0	0	100%	17,225	6,291	23,516	100%	17,225	6,291	23,516
1.2	Develop/revise detailed work plan	10%	23,369	8,534	31,903	0%	0	0	0	100%	23,369	8,534	31,903	100%	23,369	8,534	31,903
2.1	Assemble secondary data	4%	9,320	3,403	12,723	0%	0	0	0	100%	9,320	3,403	12,723	100%	9,320	3,403	12,723
2.2	Design original data collection	6%	13,358	4,878	18,236	0%	0	0	0	100%	13,358	4,878	18,236	100%	13,358	4,878	18,236
2.3	Land development benefits	14%	32,499	11,868	44,367	3%	975	356	1,331	92%	29,899	10,919	40,818	95%	30,874	11,275	42,149
2.4	Economic development benefits	21%	49,442	18,055	67,497	50%	24,721	9,028	33,749	35%	17,305	6,319	23,624	85%	42,026	15,347	57,372
2.5	Travel and smart growth benefits	29%	67,021	24,476	91,497	25%	16,755	6,119	22,874	55%	36,862	13,462	50,323	80%	53,617	19,581	73,198
2.6	Prepare/submit reports	9%	19,770	7,224	26,994	0%	0	0	0	0%	0	0	0	0%	0	0	0
	TOTAL	100%	232,004	84,729	316,733	18%	42,451	15,503	57,954	64%	147,337	53,806	201,143	82%	189,789	69,308	259,097

NOTE: The amounts reported above are estimates for reference purposes only. For a more accurate accounting of project expenditures, please refer to the official invoice for this project issued by Rutgers University Division of Grant and Contract Accounting.

UTRC Concurrence: _____

Name Title Date

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT
Date of report: November 20, 2008
Reporting period: October 1 to December 31, 2008

Project Title:	Technology Transfer Year 20
RFP NUMBER: NA	NJDOT RESEARCH PROJECT MANAGER: Wladislau (Lad) Szalaj
TASK ORDER NUMBER: RFCUNY 35	PRINCIPAL INVESTIGATOR: Robert Paaswell
Project Starting Date: 1/1/ 2008 Project Ending Date: 12/31/2008	Period Starting Date: Oct. 1, 2008 Period Ending Date: Dec. 31, 2008

Activities	% of Total	% of Task this period	% of Task to date	% of Total Complete
In House Lecture Series	30%	75%	100%	30%
Visiting Scholar Seminar Series	20%	75%	100%	20%
UTRC Research Newsletter	20%	80%	100%	20%
Other - General Activities/ Technical Editor	30%	30%	60%	18%
TOTAL	100%			88%

Project Objective:
The objectives of the Technology Transfer program are:

• To increase the awareness and level of information concerning transportation issues facing US DOT Region 2 for all within the region;
• To improve the knowledge base and approach to problem solving of the region's transportation workforce, from those operating the systems to those at the most senior levels of managing the system; by doing so, to improve the overall professional capability of the transportation workforce;
• To stimulate discussion and debate concerning the integration of new technologies into our culture, our work and our transportation systems;
• To provide the more traditional but extremely important job of dissemination of research and project reports, studies, analysis and use of tools to the education, research and practicing community;
• To provide unbiased information and testimony to decision-makers concerning regional transportation issues consistent with the UTRC theme.

The goal of the Technology Transfer Program for the New Jersey Department of Transportation is to provide research results to potential users in a form that can be directly implemented, utilized and applied to transportation operations.

1. Progress this period by activities:

- Visiting Scholar Seminars: UTRC hosted two visiting scholar seminars during this period. A seminar featuring featured Georges Amar and Dominique Laousse of RATP, France was held on September 26, 2008 at Baruch College. The topic of this seminar was "THE PARADIGM OF MOBILITY: A Radical Change in Urban Transport to Challenge Sustainability." The second seminar featured Robert Puentes, Fellow, Metropolitan Policy Program, Brookings Institution. It was held on November 21, 2008 at the Baruch College Conference Center and titled "A Bridge to Somewhere: Rethinking American Transportation for the 21st Century"

- UTRC Research News: The Fall 2008 newsletter was distributed during this period

- Other - General Activities: UTRC has distributed the final reports for recently completed projects to national transportation libraries. The UTRC website is under constant improvement. UTRC is continuing to develop online system for submission and review of proposals. UTRC staff and P.I. have participated at many conferences and technical meetings. UTRC's members have been cited on many news articles and have been invited by local TV channels to provide expertise testimonies on current transportation issues.

- In House Lecture Series: Five more presentations have been made during this period at the NJDOT office.

    - October 1st - Self cleaning and de-polluting coatings and possibilities for transportation sturctures - Dr. Balaguru, Rutgers
    - October 29th - Identification of the Source of Rutting within the Flexible Pavement Layer System - Dr. Mehta, Rowan
    - November 5th - Shifting your Paradigm--Thinking for 2010 and Beyond - Dr. Brodzinski, CCNY
    - November 13th - Using Cofiguration Management to Control Complex Transportation Projects - Dr. Williams, Rutgers
    - November 20th - Multi-hazard issues in design and repair of highway bridges - Dr. Agrawal, CCNY
- UTRC has participated in the 10th Annual NJDOT Research Showcase held on October 16, 2008 at Mercer County Community College at West Windsor, NJ.

2. Proposed activities for remaining days of 4th quarter

- Other - General Activities: UTRC will continue preparation of the annual reporting documents for submission to USDOT. The UTRC website will still be under improvement. UTRC expect to continue testing of the online system for submission and review of proposals. UTRC staff and P.I. will continue to participate at conferences and technical meetings. UTRC's P.I.s will continue to contribute in news articles.

3. List of deliverables provided in this quarter by task (product date)
    Reporting documents to RITA (performance indicators and Research project status)

4. Progress on Implementation and Training Activities
NA

5. Problems/Proposed Solutions
NA

BUDGET EXPENDED AND REMAINING

Total Project Budget	$50,000
Modified Contract Amount:	
Total Project Expenditure to date	$44,000
% of Total Project Budget Expended	88%